

111TH CONGRESS
1ST SESSION

H. R. 3820

To reauthorize Federal natural hazards reduction programs, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

OCTOBER 15, 2009

Mr. WU (for himself, Mr. SMITH of Nebraska, Mr. GRAYSON, and Mr. MOORE of Kansas) introduced the following bill; which was referred to the Committee on Science and Technology, and in addition to the Committees on Natural Resources and Transportation and Infrastructure, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To reauthorize Federal natural hazards reduction programs,
and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Natural Hazards Risk
5 Reduction Act of 2009”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1 (1) The United States faces significant risks
2 from many types of natural hazards, including
3 earthquakes, hurricanes, tornadoes, wildfires, and
4 floods. Increasing numbers of Americans are living
5 in areas prone to these hazards.

6 (2) Earthquakes occur without warning and can
7 have devastating effects. According to the U.S. Geo-
8 logical Survey, two recent earthquakes, the
9 Northridge Earthquake in 1994, and the Loma
10 Prieta Earthquake in 1989, killed nearly 100 people,
11 injured 12,757, and caused \$33 billion in damages.
12 Nearly all States face some level of seismic risk.
13 Twenty-six urban areas in 14 States have a signifi-
14 cant seismic risk.

15 (3) Severe weather is the most costly natural
16 hazard, measured on a per year basis. According to
17 data from the National Weather Service over the
18 last 10 years, tornadoes, thunderstorms, and hurri-
19 canes have caused an average of 226 fatalities and
20 \$16 billion of property damage per year. The 2005
21 hurricane season was one of the most destructive in
22 United States history, killing 1,836 people, and
23 causing \$80 billion in damage.

24 (4) The United States Fire Administration re-
25 ports that 38 percent of new home construction in

1 2002 was in areas adjacent to, or intermixed with,
2 wildlands. Fires in the wildland-urban interface are
3 costly. For example, the 2007 California Witch fire
4 alone caused \$1.3 billion in insured property losses,
5 according to the Insurance Services Office (ISO). In
6 addition, Government Accountability Office reported
7 in 2007 that the Federal spending for wildfire sup-
8 pression between 2001 and 2005 was, on average,
9 \$2.9 billion per year.

10 (5) Developing better knowledge about natural
11 hazard phenomena and their effects is crucial to as-
12 sessing the risks these hazards pose to communities.
13 Instrumentation, monitoring, and data gathering to
14 characterize earthquakes and wind events are impor-
15 tant activities to increase this knowledge.

16 (6) Current building codes and standards can
17 mitigate the damages caused by natural hazards.
18 The Institute for Business and Home Safety esti-
19 mated that the \$19 billion in damage caused by
20 Hurricane Andrew in 1994 could have been reduced
21 by half if such codes and standards were in effect.
22 Research for the continuous improvement of building
23 codes, standards, and design practices—and for de-
24 veloping methods to retrofit existing structures—is
25 crucial to mitigating losses from natural hazards.

1 (7) Since its creation in 1977, the National
2 Earthquake Hazards Reduction Program (NEHRP)
3 has supported research to develop seismic codes,
4 standards, and building practices that have been
5 widely adopted. The NEHRP Recommended Provi-
6 sions for Seismic Regulations for New Buildings and
7 Other Structures and the Guidance for Seismic Per-
8 formance Assessment of Buildings are two examples.

9 (8) Research to understand the institutional,
10 social, behavioral, and economic factors that influ-
11 ence how households, businesses, and communities
12 perceive risk and prepare for natural hazards, and
13 how well they recover after a disaster, can increase
14 the implementation of risk mitigation measures.

15 (9) A major goal of the Federal natural haz-
16 ards-related research and development effort should
17 be to reduce the loss of life and damage to commu-
18 nities and infrastructure through increasing the
19 adoption of hazard mitigation measures.

20 (10) Research, development, and technology
21 transfer to secure infrastructure is vitally important.
22 Infrastructure that supports electricity, transpor-
23 tation, drinking water, and other services is vital im-
24 mediately after a disaster, and their quick return to

1 function speeds the economic recovery of a disaster-
2 impacted community.

3 **TITLE I—EARTHQUAKES**

4 **SEC. 101. SHORT TITLE.**

5 This title may be cited as the “National Earthquake
6 Hazards Reduction Program Reauthorization Act of
7 2009”.

8 **SEC. 102. FINDINGS.**

9 Section 2 of the Earthquake Hazards Reduction Act
10 of 1977 (42 U.S.C. 7701) is repealed.

11 **SEC. 103. DEFINITIONS.**

12 Section 4 of the National Earthquake Hazards Re-
13 duction Act of 1977 (42 U.S.C. 7703) is amended by
14 striking paragraphs (8) and (9).

15 **SEC. 104. NATIONAL EARTHQUAKE HAZARDS REDUCTION** 16 **PROGRAM.**

17 Section 5 of the National Earthquake Hazards Re-
18 duction Act of 1977 (42 U.S.C. 7704) is amended—

19 (1) in subsection (a)—

20 (A) by amending paragraph (2) to read as
21 follows:

22 “(2) PROGRAM ACTIVITIES.—The activities of
23 the Program shall be designed to—

24 “(A) research and develop effective meth-
25 ods, tools, and technologies to reduce the risk

posed by earthquakes to the built environment,
especially to lessen the risk to existing structures and lifelines;

“(B) improve the understanding of earthquakes and their effects on households, businesses, communities, buildings, structures, and lifelines, through interdisciplinary and multidisciplinary research that involves engineering, natural sciences, and social sciences; and

“(C) facilitate the adoption of earthquake risk reduction measures by households, businesses, communities, local, State, and Federal governments, national standards and model building code organizations, architects and engineers, building owners, and others with a role in planning for disasters and planning, constructing, retrofitting, and insuring buildings, structures, and lifelines through—

“(i) grants, contracts, cooperative agreements, and technical assistance;

“(ii) development of standards, guidelines, voluntary consensus standards, and other design guidance for earthquake hazards risk reduction for buildings, structures, and lifelines;

1 “(iii) outreach and information dis-
 2 semination to communities on location-spe-
 3 cific earthquake hazards and methods to
 4 reduce the risks from those hazards; and

5 “(iv) development and maintenance of
 6 a repository of information, including tech-
 7 nical data, on seismic risk and hazards re-
 8 duction.”; and

9 (B) by striking paragraphs (3) through
 10 (5);

11 (2) by amending subsection (b) to read as fol-
 12 lows:

13 “(b) RESPONSIBILITIES OF PROGRAM AGENCIES.—

14 “(1) LEAD AGENCY.—The National Institute of
 15 Standards and Technology (in this section referred
 16 to as the ‘Institute’) shall be responsible for plan-
 17 ning and coordinating the Program. In carrying out
 18 this paragraph, the Director of the Institute shall—

19 “(A) ensure that the Program includes the
 20 necessary components to promote the imple-
 21 mentation of earthquake hazards risk reduction
 22 measures by households, businesses, commu-
 23 nities, local, State, and Federal governments,
 24 national standards and model building code or-
 25 ganizations, architects and engineers, building

1 owners, and others with a role in preparing for
2 disasters, or the planning, constructing, retro-
3 fitting, and insuring of buildings, structures,
4 and lifelines;

5 “(B) support the development of perform-
6 ance-based seismic engineering tools, and work
7 with the appropriate groups to promote the
8 commercial application of such tools, through
9 earthquake-related building codes, standards,
10 and construction practices;

11 “(C) ensure the use of social science re-
12 search and findings in informing research and
13 technology development priorities, commu-
14 nicating earthquake risks to the public, devel-
15 oping earthquake risk mitigation strategies, and
16 preparing for earthquake disasters;

17 “(D) coordinate all Federal post-earth-
18 quake investigations; and

19 “(E) when warranted by research or inves-
20 tigative findings, issue recommendations for
21 changes in model codes to the relevant code de-
22 velopment organizations, and report back to
23 Congress on whether such recommendations
24 were adopted.

1 “(2) NATIONAL INSTITUTE OF STANDARDS AND
2 TECHNOLOGY.—In addition to the lead agency re-
3 sponsibilities described under paragraph (1), the In-
4 stitute shall be responsible for carrying out research
5 and development to improve building codes and
6 standards and practices for buildings, structures,
7 and lifelines. In carrying out this paragraph, the Di-
8 rector of the Institute shall—

9 “(A) work, in conjunction with other ap-
10 propriate Federal agencies, to support the de-
11 velopment of improved seismic standards and
12 model codes;

13 “(B) in coordination with other appro-
14 priate Federal agencies, work closely with
15 standards and model code development organi-
16 zations, professional societies, and practicing
17 engineers, architects, and others involved in the
18 construction of buildings, structures, and life-
19 lines, to promote better building practices, in-
20 cluding by—

21 “(i) developing technical resources for
22 practitioners on new knowledge and stand-
23 ards of practice; and

24 “(ii) developing methods and tools to
25 facilitate the incorporation of earthquake

1 engineering principles into design and con-
2 struction practices;

3 “(C) develop tools, technologies, methods,
4 and practitioner guidance to feasibly and cost-
5 effectively retrofit existing buildings and struc-
6 tures to increase their earthquake resiliency;
7 and

8 “(D) work closely with national standards
9 organizations, and other interested parties, to
10 develop seismic safety standards and practices
11 for new and existing lifelines.

12 “(3) FEDERAL EMERGENCY MANAGEMENT
13 AGENCY.—

14 “(A) IN GENERAL.—The Federal Emer-
15 gency Management Agency (in this paragraph
16 referred to as the ‘Agency’) shall be responsible
17 for facilitating the development and adoption of
18 standards, model building codes, and better
19 seismic building practices, developing tools to
20 assess earthquake hazards, promoting the adop-
21 tion of hazard mitigation measures, and car-
22 rying out a program of direct assistance to
23 States and localities to mitigate earthquake
24 risks to buildings, structures, lifelines, and com-
25 munities.

1 “(B) DIRECTOR’S DUTIES.—The Director
2 of the Agency shall—

3 “(i) work closely with other relevant
4 Federal agencies, standards and model
5 building code development organizations,
6 architects, engineers, and other profes-
7 sionals, to facilitate the development and
8 adoption of standards, model codes, and
9 design and construction practices to in-
10 crease the earthquake resiliency of new
11 and existing buildings, structures, and life-
12 lines in the—

13 “(I) preparation, maintenance,
14 and wide dissemination of design
15 guidance, model building codes and
16 standards, and practices to increase
17 the earthquake resiliency of new and
18 existing buildings, structures, and life-
19 lines;

20 “(II) development of perform-
21 ance-based design guidelines and
22 methodologies supporting model codes
23 for buildings, structures, and lifelines;
24 and

1 “(III) development of methods
2 and tools to facilitate the incorpora-
3 tion of earthquake engineering prin-
4 ciples into design and construction
5 practices;

6 “(ii) develop tools, technologies, and
7 methods to assist local planners, and oth-
8 ers, to model and predict the potential im-
9 pact of earthquake damage in seismically
10 hazardous areas; and

11 “(iii) support the implementation of a
12 comprehensive earthquake education and
13 public awareness program, including the
14 development of materials and their wide
15 dissemination to all appropriate audiences,
16 and support public access to locality-spe-
17 cific information that may assist the public
18 in preparing for, mitigating against, re-
19 sponding to, and recovering from earth-
20 quakes and related disasters.

21 “(C) STATE ASSISTANCE GRANT PRO-
22 GRAM.—The Director of the Agency shall oper-
23 ate a program of grants and assistance to en-
24 able States to develop mitigation, preparedness,
25 and response plans, compare inventories and

1 conduct seismic safety inspections of critical
2 structures and lifelines, update building and
3 zoning codes and ordinances to enhance seismic
4 safety, increase earthquake awareness and edu-
5 cation, and encourage the development of
6 multistate groups for such purposes. In order to
7 qualify for assistance under this subparagraph,
8 a State must—

9 “(i) demonstrate that the assistance
10 will result in enhanced seismic safety in
11 the State;

12 “(ii) provide 50 percent of the costs of
13 the activities for which assistance is being
14 given, except that the Director may lower
15 or waive the cost-share requirement for
16 these activities in exceptional cases of eco-
17 nomic hardship; and

18 “(iii) meet such other requirements as
19 the Director of the Agency shall prescribe.

20 “(4) UNITED STATES GEOLOGICAL SURVEY.—

21 The United States Geological Survey (in this para-
22 graph referred to as the ‘Survey’) shall conduct re-
23 search and other activities necessary to characterize
24 and identify earthquake hazards, assess earthquake
25 risks, monitor seismic activity, and provide real-time

1 earthquake information. In carrying out this para-
2 graph, the Director of the Survey shall—

3 “(A) conduct a systematic assessment of
4 the seismic risks in each region of the Nation
5 prone to earthquakes, including, where appro-
6 priate, the establishment and operation of in-
7 tensive monitoring projects on hazardous faults,
8 detailed seismic hazard and risk studies in
9 urban and other developed areas where earth-
10 quake risk is determined to be significant, and
11 engineering seismology studies;

12 “(B) work with officials of State and local
13 governments to ensure that they are knowledge-
14 able about the specific seismic risks in their
15 areas;

16 “(C) develop standard procedures, in con-
17 sultation with the Director of the Federal
18 Emergency Management Agency, for issuing
19 earthquake alerts, including aftershock
20 advisories;

21 “(D) issue when justified, and notify the
22 Director of the Federal Emergency Manage-
23 ment Agency of, an earthquake prediction or
24 other earthquake advisory, which may be evalu-

1 ated by the National Earthquake Prediction
2 Evaluation Council;

3 “(E) operate, as integral parts of the Ad-
4 vanced National Seismic Research and Moni-
5 toring System, a National Earthquake Informa-
6 tion Center and a national seismic network, to-
7 gether providing timely and accurate informa-
8 tion on earthquakes world-wide;

9 “(F) support the operation of regional seis-
10 mic networks in areas of higher seismic risk;

11 “(G) develop and support seismic instru-
12 mentation of buildings and other structures to
13 obtain data on their response to earthquakes
14 for use in engineering studies and assessment
15 of damage;

16 “(H) monitor and assess Earth surface de-
17 formation as it pertains to the evaluation of
18 earthquake hazards and impacts;

19 “(I) work with other Program agencies to
20 maintain awareness of, and where appropriate
21 cooperate with, earthquake risk reduction ef-
22 forts in other countries, to ensure that the Pro-
23 gram benefits from relevant information and
24 advances in those countries;

1 “(J) maintain suitable seismic hazard
2 maps in support of building codes for structures
3 and lifelines, including additional maps needed
4 for performance-based design approaches;

5 “(K) conduct a competitive, peer-reviewed
6 process which awards grants and cooperative
7 agreements to complement and extend related
8 internal Survey research and monitoring activi-
9 ties; and

10 “(L) operate, in cooperation with the Na-
11 tional Science Foundation, a Global Seis-
12 mographic Network for detection of earth-
13 quakes around the world and research into fun-
14 damental earth processes.

15 “(5) NATIONAL SCIENCE FOUNDATION.—The
16 National Science Foundation shall be responsible for
17 funding basic research that furthers the under-
18 standing of earthquakes, earthquake engineering,
19 and community preparation and response to earth-
20 quakes. In carrying out this paragraph, the Director
21 of the National Science Foundation shall—

22 “(A) support multidisciplinary and inter-
23 disciplinary research that will improve the resil-
24 iency of communities to earthquakes, includ-
25 ing—

1 “(i) research that improves the safety
2 and performance of buildings, structures,
3 and lifelines, including the use of the large-
4 scale experimental and computational fa-
5 cilities of the George E. Brown, Jr. Net-
6 work for Engineering Earthquake Simula-
7 tion;

8 “(ii) research to support more effec-
9 tive earthquake mitigation and response
10 measures, such as developing better knowl-
11 edge of the specific types of vulnerabilities
12 faced by population groups and economic
13 sectors vulnerable to earthquakes, address-
14 ing the barriers they face in adopting miti-
15 gation and preparation measures, and de-
16 veloping methods to better communicate
17 the risks of earthquakes and to promote
18 mitigation; and

19 “(iii) research on the response of com-
20 munities, households, businesses, and
21 emergency responders to earthquakes;

22 “(B) support research to understand
23 earthquake processes, earthquake patterns, and
24 earthquake frequencies;

1 “(C) encourage prompt dissemination of
2 significant findings, sharing of data, samples,
3 physical collections, and other supporting mate-
4 rials, and development of intellectual property
5 so research results can be used by appropriate
6 organizations to mitigate earthquake damage;

7 “(D) work with other Program agencies to
8 maintain awareness of, and where appropriate
9 cooperate with, earthquake risk reduction re-
10 search efforts in other countries, to ensure that
11 the Program benefits from relevant information
12 and advances in those countries; and

13 “(E) include to the maximum extent prac-
14 ticable diverse institutions, including Histori-
15 cally Black Colleges and Universities, Hispanic-
16 serving institutions, Tribal Colleges and Univer-
17 sities, Alaska Native-serving institutions, and
18 Native Hawaiian-serving institutions.”; and

19 (3) in subsection (c)(1) by inserting “on Nat-
20 ural Hazards Risk Reduction established under sec-
21 tion 301 of the Natural Hazards Risk Reduction Act
22 of 2009” after “Interagency Coordinating Com-
23 mittee”.

1 **SEC. 105. POST-EARTHQUAKE INVESTIGATIONS PROGRAM.**

2 Section 11 of the Earthquake Hazards Reduction Act
3 of 1977 (42 U.S.C. 7705e) is amended by striking “There
4 is established” and all that follows through “conduct of
5 such earthquake investigations.” and inserting “The Pro-
6 gram shall include a post-earthquake investigations pro-
7 gram, the purpose of which is to investigate major earth-
8 quakes so as to learn lessons which can be applied to re-
9 duce the loss of lives and property in future earthquakes.
10 The lead Program agency, in consultation with each Pro-
11 gram agency, shall organize investigations to study the im-
12 plications of the earthquakes in the areas of responsibility
13 of each Program agency. The investigations shall begin
14 as rapidly as possible and may be conducted by grantees
15 and contractors. The Program agencies shall ensure that
16 the results of the investigations are disseminated widely.”.

17 **SEC. 106. AUTHORIZATION OF APPROPRIATIONS.**

18 (a) IN GENERAL.—Section 12 of the Earthquake
19 Hazards Reduction Act of 1977 (42 U.S.C. 7706) is
20 amended—

21 (1) by adding at the end of subsection (a) the
22 following:

23 “(9) There are authorized to be appropriated to the
24 Federal Emergency Management Agency for carrying out
25 this Act—

26 “(A) \$10,238,000 for fiscal year 2010;

1 “(B) \$10,545,000 for fiscal year 2011;
2 “(C) \$10,861,000 for fiscal year 2012;
3 “(D) \$11,187,000 for fiscal year 2013; and
4 “(E) \$11,523,000 for fiscal year 2014.”;

5 (2) by adding at the end of subsection (b) the
6 following:

7 “(3) There are authorized to be appropriated to the
8 United States Geological Survey for carrying out this Act,
9 including the Advanced National Seismic Research and
10 Monitoring System—

11 “(A) \$70,000,000 for fiscal year 2010;
12 “(B) \$72,100,000 for fiscal year 2011;
13 “(C) \$74,263,000 for fiscal year 2012;
14 “(D) \$76,491,000 for fiscal year 2013; and
15 “(E) \$78,786,000 for fiscal year 2014.”;

16 (3) by adding at the end of subsection (c) the
17 following:

18 “(3) There are authorized to be appropriated to the
19 National Science Foundation for carrying out this Act—

20 “(A) \$64,125,000 for fiscal year 2010;
21 “(B) \$66,049,000 for fiscal year 2011;
22 “(C) \$68,030,000 for fiscal year 2012;
23 “(D) \$70,071,000 for fiscal year 2013; and
24 “(E) \$72,173,000 for fiscal year 2014.”; and

1 (4) by adding at the end of subsection (d) the
 2 following:

3 “(3) There are authorized to be appropriated to the
 4 National Institute of Standards and Technology for car-
 5 rying out this Act—

6 “(A) \$7,000,000 for fiscal year 2010;

7 “(B) \$7,700,000 for fiscal year 2011;

8 “(C) \$7,931,000 for fiscal year 2012;

9 “(D) \$8,169,000 for fiscal year 2013; and

10 “(E) \$8,414,000 for fiscal year 2014.”.

11 (b) CONFORMING AMENDMENT.—Section 14(b) of
 12 the National Earthquake Hazards Reduction Act of 1977
 13 (42 U.S.C. 7708(b)) is repealed.

14 **TITLE II—WIND**

15 **SEC. 201. SHORT TITLE.**

16 This title may be cited as the “National Windstorm
 17 Impact Reduction Act Reauthorization of 2009”.

18 **SEC. 202. PURPOSE.**

19 Section 202 of the National Windstorm Impact Re-
 20 duction Act of 2004 (42 U.S.C. 15701) is amended to
 21 read as follows:

22 **“SEC. 202. PURPOSE.**

23 “It is the purpose of the Congress in this title to
 24 achieve a major measurable reduction in losses of life and
 25 property from windstorms through the establishment and

1 maintenance of an effective Windstorm Impact Reduction
2 Program. The objectives of such Program shall include—

3 “(1) the education of households, businesses,
4 and communities about the risks posed by wind-
5 storms, and the identification of locations, struc-
6 tures, lifelines, and segments of the community
7 which are especially vulnerable to windstorm damage
8 and disruption, and the dissemination of information
9 on methods to reduce those risks;

10 “(2) the development of technologically and eco-
11 nomically feasible design and construction methods
12 and procedures to make new and existing structures,
13 in areas of windstorm risk, windstorm resilient, giv-
14 ing high priority to the development of such methods
15 and procedures for lifelines, structures associated
16 with a potential high loss of life, and structures that
17 are especially needed in times of disasters, such as
18 hospitals and public safety and shelter facilities;

19 “(3) the implementation, in areas of major
20 windstorm risk, of instrumentation to record and
21 gather data on windstorms and the characteristics of
22 the wind during those events, and continued re-
23 search to increase the understanding of windstorm
24 phenomena;

1 “(4) the development, publication, and pro-
2 motion, in conjunction with State and local officials
3 and professional organizations, of model building
4 codes and standards and other means to encourage
5 consideration of information about windstorm risk in
6 making decisions about land use policy and construc-
7 tion activity; and

8 “(5) the facilitation of the adoption of wind-
9 storm risk mitigation measures in areas of wind-
10 storm risk by households, businesses, and commu-
11 nities through outreach, incentive programs, and
12 other means.”.

13 **SEC. 203. DEFINITIONS.**

14 Section 203(1) of the National Windstorm Impact
15 Reduction Act of 2004 (42 U.S.C. 15702(1)) is amended
16 by striking “Director of the Office of Science and Tech-
17 nology Policy” and inserting “Director of the National In-
18 stitute of Standards and Technology”.

19 **SEC. 204. NATIONAL WINDSTORM IMPACT REDUCTION PRO-**
20 **GRAM.**

21 Section 204 of the National Windstorm Impact Re-
22 duction Act of 2004 (42 U.S.C. 15703) is amended to
23 read as follows:

1 **“SEC. 204. NATIONAL WINDSTORM IMPACT REDUCTION**
2 **PROGRAM.**

3 “(a) ESTABLISHMENT.—There is established the Na-
4 tional Windstorm Impact Reduction Program.

5 “(b) PROGRAM ACTIVITIES.—The activities of the
6 Program shall be designed to—

7 “(1) research and develop cost-effective, feasible
8 methods, tools, and technologies to reduce the risks
9 posed by windstorms to the built environment, espe-
10 cially to lessen the risk to existing structures and
11 lifelines;

12 “(2) improve the understanding of windstorms
13 and their impacts on households, businesses, com-
14 munities, buildings, structures, and lifelines, through
15 interdisciplinary and multidisciplinary research that
16 involves engineering, natural sciences, and social
17 sciences; and

18 “(3) facilitate the adoption of windstorm risk
19 reduction measures by households, businesses, com-
20 munities, local, State and Federal governments, na-
21 tional standards and model building code organiza-
22 tions, architects and engineers, building owners, and
23 others with a role in planning for disasters and plan-
24 ning, constructing, retrofitting, and insuring build-
25 ings, structures, and lifelines through—

1 “(A) grants, contracts, cooperative agree-
2 ments, and technical assistance;

3 “(B) development of hazard maps, stand-
4 ards, guidelines, voluntary consensus standards,
5 and other design guidance for windstorm risk
6 reduction for buildings, structures, and lifelines;

7 “(C) outreach and information dissemina-
8 tion to communities on site specific windstorm
9 hazards and ways to reduce the risks from
10 those hazards; and

11 “(D) development and maintenance of a
12 repository of information, including technical
13 data, on windstorm hazards and risk reduction;

14 “(c) RESPONSIBILITIES OF PROGRAM AGENCIES.—

15 “(1) LEAD AGENCY.—The National Institute of
16 Standards and Technology (in this section referred
17 to as the ‘Institute’) shall be responsible for plan-
18 ning and coordinating the Program. In carrying out
19 this paragraph, the Director of the Institute shall—

20 “(A) ensure that the Program includes the
21 necessary components to promote the imple-
22 mentation of windstorm risk reduction meas-
23 ures by households, businesses, communities,
24 local, State, and Federal governments, national
25 standards and model building code organiza-

1 tions, architects and engineers, building owners,
2 and others with a role in planning and pre-
3 paring for disasters, and planning constructing,
4 and retrofitting, and insuring buildings, struc-
5 tures, and lifelines;

6 “(B) support the development of perform-
7 ance-based engineering tools, and work with the
8 appropriate groups to promote the commercial
9 application of such tools, through wind-related
10 building codes, standards, and construction
11 practices;

12 “(C) ensure the use of social science re-
13 search and findings in informing the develop-
14 ment of technology and research priorities, in
15 communicating windstorm risks to the public,
16 in developing windstorm risk mitigation strate-
17 gies, and in preparing for windstorm disasters;

18 “(D) coordinate all Federal post-windstorm
19 investigations; and

20 “(E) when warranted by research or inves-
21 tigative findings, issue recommendations for
22 changes in model codes to the relevant code de-
23 velopment organizations, and report back to
24 Congress on whether such recommendations
25 were adopted.

1 “(2) NATIONAL INSTITUTE OF STANDARDS AND
2 TECHNOLOGY.—In addition to the lead agency re-
3 sponsibilities described under paragraph (1), the In-
4 stitute shall be responsible for carrying out research
5 and development to improve model codes, standards,
6 design guidance and practices for the construction
7 and retrofit of buildings, structures, and lifelines. In
8 carrying out this paragraph, the Director of the In-
9 stitute shall—

10 “(A) support the development of instru-
11 mentation, data processing, and archival capa-
12 bilities, and standards for the instrumentation
13 and its deployment, to measure wind, wind
14 loading, and other properties of severe wind and
15 structure response;

16 “(B) coordinate with other appropriate
17 Federal agencies to make the data described in
18 subparagraph (A) available to researchers,
19 standards and code developers, and local plan-
20 ners;

21 “(C) support the development of tools and
22 methods for the collection of data on the loss of
23 and damage to structures, and data on sur-
24 viving structures after severe windstorm events;

1 “(D) improve the knowledge of the impact
2 of severe wind on buildings, structures, lifelines,
3 and communities;

4 “(E) develop cost-effective windstorm im-
5 pact reduction tools, methods, and technologies;

6 “(F) work, in conjunction with other ap-
7 propriate Federal agencies, to support the de-
8 velopment of wind standards and model codes;
9 and

10 “(G) in conjunction with other appropriate
11 Federal agencies, work closely with standards
12 and model code development organizations, pro-
13 fessional societies, and practicing engineers, ar-
14 chitects, and others involved in the construction
15 of buildings, structures, and lifelines, to pro-
16 mote better building practices, including by—

17 “(i) supporting the development of
18 technical resources for practitioners to im-
19 plement new knowledge; and

20 “(ii) supporting the development of
21 methods and tools to incorporate wind en-
22 gineering principles into design and con-
23 struction practices.

24 “(3) FEDERAL EMERGENCY MANAGEMENT
25 AGENCY.—The Federal Emergency Management

1 Agency shall support the development of risk assess-
2 ment tools and effective mitigation techniques, assist
3 with windstorm-related data collection and analysis,
4 and support outreach, information dissemination,
5 and implementation of windstorm preparedness and
6 mitigation measures by households, businesses, and
7 communities, including by—

8 “(A) working to develop or improve risk-
9 assessment tools, methods, and models;

10 “(B) work closely with other appropriate
11 Federal agencies to develop and facilitate the
12 adoption of windstorm impact reduction meas-
13 ures, including by—

14 “(i) developing cost-effective retrofit
15 measures for existing buildings, structures,
16 and lifelines to improve windstorm per-
17 formance;

18 “(ii) developing methods, tools, and
19 technologies to improve the planning, de-
20 sign, and construction of new buildings,
21 structures, and lifelines;

22 “(iii) supporting the development of
23 model wind codes and standards for build-
24 ings, structures, and lifelines; and

1 “(iv) developing technical resources
2 for practitioners that reflect new knowl-
3 edge and standards of practice; and

4 “(C) develop and disseminate guidelines
5 for the construction of windstorm shelters.

6 “(4) NATIONAL OCEANIC AND ATMOSPHERIC
7 ADMINISTRATION.—The National Oceanic and At-
8 mospheric Administration shall support atmospheric
9 sciences research and data collection to improve the
10 understanding of the behavior of windstorms and
11 their impact on buildings, structures, and lifelines,
12 including by—

13 “(A) working with other appropriate Fed-
14 eral agencies to develop and deploy instrumen-
15 tation to measure speed and other characteris-
16 tics of wind, and to collect, analyze, and make
17 available such data;

18 “(B) working with officials of State and
19 local governments to ensure that they are
20 knowledgeable about, and prepared for, the spe-
21 cific windstorm risks in their area;

22 “(C) maintaining suitable wind speed maps
23 in support of standards for codes for buildings,
24 structures, and lifelines;

1 “(D) conducting a competitive, peer-re-
2 viewed process which awards grants and cooper-
3 ative agreements to complement the National
4 Oceanic and Atmospheric Administration’s
5 wind-related research and data collection activi-
6 ties; and

7 “(E) working with other appropriate Fed-
8 eral agencies to develop or improve risk-assess-
9 ment tools, methods, and models.

10 “(5) NATIONAL SCIENCE FOUNDATION.—The
11 National Science Foundation shall be responsible for
12 funding basic research that furthers the under-
13 standing of windstorms, wind engineering, and com-
14 munity preparation and response to windstorms. In
15 carrying out this paragraph, the Director of the Na-
16 tional Science Foundation shall—

17 “(A) support multidisciplinary and inter-
18 disciplinary research that will improve the resil-
19 iency of communities to windstorms, includ-
20 ing—

21 “(i) research that improves the safety
22 and performance of buildings, structures,
23 and lifelines;

24 “(ii) research to support more effec-
25 tive windstorm mitigation and response

1 measures, such as developing better knowl-
2 edge of the specific types of vulnerabilities
3 faced by population groups and economic
4 sectors vulnerable to windstorms, address-
5 ing the barriers they face in adopting miti-
6 gation and preparation measures, and de-
7 veloping methods to better communicate
8 the risks of windstorms and to promote
9 mitigation; and

10 “(iii) research on the response of com-
11 munities to windstorms, including on the
12 effectiveness of the emergency response,
13 and the recovery process of communities,
14 households, and businesses;

15 “(B) support research to understand wind-
16 storm processes, windstorm patterns, and wind-
17 storm frequencies;

18 “(C) encourage prompt dissemination of
19 significant findings, sharing of data, samples,
20 physical collections, and other supporting mate-
21 rials, and development of intellectual property
22 so research results can be used by appropriate
23 organizations to mitigate windstorm damage;

24 “(D) work with other Program agencies to
25 maintain awareness of, and where appropriate

1 cooperate with, windstorm risk reduction re-
 2 search efforts in other countries, to ensure that
 3 the Program benefits from relevant information
 4 and advances in those countries; and

5 “(E) include to the maximum extent prac-
 6 ticable diverse institutions, including Histori-
 7 cally Black Colleges and Universities, Hispanic-
 8 serving institutions, Tribal Colleges and Univer-
 9 sities, Alaska Native-serving institutions, and
 10 Native Hawaiian-serving institutions.”.

11 **SEC. 205. AUTHORIZATION OF APPROPRIATIONS.**

12 Section 207 of the National Windstorm Impact Re-
 13 duction Program of 2004 (42 U.S.C. 15706) is amended
 14 to read as follows:

15 **“SEC. 207. AUTHORIZATION OF APPROPRIATIONS.**

16 “(a) FEDERAL EMERGENCY MANAGEMENT AGEN-
 17 CY.—There are authorized to be appropriated to the Fed-
 18 eral Emergency Management Agency for carrying out this
 19 title—

- 20 “(1) \$9,682,000 for fiscal year 2010;
- 21 “(2) \$9,972,500 for fiscal year 2011;
- 22 “(3) \$10,271,600 for fiscal year 2012;
- 23 “(4) \$10,579,800 for fiscal year 2013; and
- 24 “(5) \$10,897,200 for fiscal year 2014.

1 “(b) NATIONAL SCIENCE FOUNDATION.—There are
2 authorized to be appropriated to the National Science
3 Foundation for carrying out this title—

- 4 “(1) \$9,682,000 for fiscal year 2010;
5 “(2) \$9,972,500 for fiscal year 2011;
6 “(3) \$10,271,600 for fiscal year 2012;
7 “(4) \$10,579,800 for fiscal year 2013; and
8 “(5) \$10,897,200 for fiscal year 2014.

9 “(c) NATIONAL INSTITUTE OF STANDARDS AND
10 TECHNOLOGY.—There are authorized to be appropriated
11 to the National Institute of Standards and Technology for
12 carrying out this title—

- 13 “(1) \$4,120,000 for fiscal year 2010;
14 “(2) \$4,243,600 for fiscal year 2011;
15 “(3) \$4,370,900 for fiscal year 2012;
16 “(4) \$4,502,000 for fiscal year 2013; and
17 “(5) \$4,637,100 for fiscal year 2014.

18 “(d) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN-
19 ISTRATION.—There are authorized to be appropriated to
20 the National Oceanic and Atmospheric Administration for
21 carrying out this title—

- 22 “(1) \$2,266,000 for fiscal year 2010;
23 “(2) \$2,334,000 for fiscal year 2011;
24 “(3) \$2,404,000 for fiscal year 2012;
25 “(4) \$2,476,100 for fiscal year 2013; and

1 “(5) \$2,550,400 for fiscal year 2014.”.

2 **TITLE III—INTERAGENCY CO-**
3 **ORDINATING COMMITTEE ON**
4 **NATURAL HAZARDS RISK RE-**
5 **DUCTION**

6 **SEC. 301. INTERAGENCY COORDINATING COMMITTEE ON**
7 **NATURAL HAZARDS RISK REDUCTION.**

8 (a) IN GENERAL.—There is established an Inter-
9 agency Coordinating Committee on Natural Hazards Risk
10 Reduction, chaired by the Director of the National Insti-
11 tute of Standards and Technology.

12 (1) MEMBERSHIP.—In addition to the chair,
13 the Committee shall be composed of—

14 (A) the directors of—

15 (i) the Federal Emergency Manage-
16 ment Agency;

17 (ii) the United State Geological Sur-
18 vey;

19 (iii) the National Oceanic and Atmos-
20 pheric Administration;

21 (iv) the National Science Foundation;

22 (v) the Office of Science and Tech-
23 nology Policy; and

24 (vi) the Office of Management and
25 Budget; and

1 (B) the head of any other Federal agency
2 the Committee considers appropriate.

3 (2) MEETINGS.—The Committee shall not meet
4 less than 2 times a year at the call of the Director
5 of the National Institute of Standards and Tech-
6 nology.

7 (3) GENERAL PURPOSE AND DUTIES.—The
8 Committee shall oversee the planning and coordina-
9 tion of the National Earthquake Hazards Reduction
10 Program and the National Windstorm Impact Re-
11 duction Program, and shall make proposals for plan-
12 ning and coordination of any other Federal research
13 for natural hazard mitigation that the Committee
14 considers appropriate.

15 (4) STRATEGIC PLANS.—The Committee
16 shall—

17 (A) develop and submit to Congress, not
18 later than one year after the date of enactment
19 of this Act—

20 (i) a Strategic Plan for the National
21 Earthquake Hazards Reduction Program
22 that includes—

23 (I) prioritized goals for such Pro-
24 gram that will mitigate against the

1 loss of life and property from future
2 earthquakes;

3 (II) short-term, mid-term, and
4 long-term research objectives to
5 achieve those goals;

6 (III) a description of the role of
7 each Program agency in achieving the
8 prioritized goals;

9 (IV) the methods by which
10 progress towards the goals will be as-
11 sessed;

12 (V) an explanation of how the
13 Program will foster the transfer of re-
14 search results onto outcomes, such as
15 improved building codes;

16 (VI) a description of the role of
17 social science in informing the devel-
18 opment of the prioritized goals and re-
19 search objectives; and

20 (VII) a description of how the
21 George E. Brown, Jr. Network for
22 Earthquake Engineering Simulation
23 and the Advanced National Seismic
24 Research and Monitoring System will

1 be used in achieving the prioritized
2 goals and research objectives; and

3 (ii) a Strategic Plan for the National
4 Windstorm Impact Reduction Program
5 that includes—

6 (I) prioritized goals for such Pro-
7 gram that will mitigate against the
8 loss of life and property from future
9 windstorms;

10 (II) short-term, mid-term, and
11 long-term research objectives to
12 achieve those goals;

13 (III) a description of the role of
14 each Program agency in achieving the
15 prioritized goals;

16 (IV) the methods by which
17 progress towards the goals will be as-
18 sessed;

19 (V) an explanation of how the
20 Program will foster the transfer of re-
21 search results onto outcomes, such as
22 improved building codes; and

23 (VI) a description of the role of
24 social science in informing the devel-

1 opment of the prioritized goals and re-
2 search objectives.

3 (5) PROGRESS REPORTS.—Not later than one
4 year after the date of enactment of this Act, and at
5 least once every two years thereafter, the Committee
6 shall submit to the Congress—

7 (A) a report on the progress of the Na-
8 tional Earthquake Hazards Reduction Program
9 that includes—

10 (i) a description of the activities fund-
11 ed for the previous two years of the Pro-
12 gram, a description of how these activities
13 align with the prioritized goals and re-
14 search objectives established in the Stra-
15 tegic Plan, and the budgets, per agency,
16 for these activities;

17 (ii) the outcomes achieved by the Pro-
18 gram for each of the goals identified in the
19 Strategic Plan;

20 (iii) a description of any recommenda-
21 tions made to change existing building
22 codes that were the result of Program ac-
23 tivities; and

24 (iv) a description of the extent to
25 which the Program has incorporated rec-

ommendations from the Advisory Committee on Earthquake Hazards Reduction; and

(B) a report on the progress of the National Windstorm Impact Reduction Program that includes—

(i) a description of the activities funded for the previous two years of the Program, a description of how these activities align with the prioritized goals and research objectives established in the Strategic Plan, and the budgets, per agency, for these activities;

(ii) the outcomes achieved by the Program for each of the goals identified in the Strategic Plan;

(iii) a description of any recommendations made to change existing building codes that were the result of Program activities; and

(iv) a description of the extent to which the Program has incorporated recommendations from the Advisory Committee on Windstorm Impact Reduction.

1 (6) COORDINATED BUDGET.—The Committee
2 shall develop a coordinated budget for the National
3 Earthquake Hazards Reduction Program and a co-
4 ordinated budget for the National Windstorm Im-
5 pact Reduction Program. These budgets shall be
6 submitted to the Congress at the time of the Presi-
7 dent’s budget submission for each fiscal year.

8 (b) ADVISORY COMMITTEES ON NATURAL HAZARDS
9 REDUCTION.—

10 (1) IN GENERAL.—The Director of the National
11 Institute of Standards and Technology shall estab-
12 lish an Advisory Committee on Earthquake Hazards
13 Reduction, an Advisory Committee on Windstorm
14 Impact Reduction, and other such advisory commit-
15 tees as the Director considers necessary to advise
16 the Institute on research, development, and tech-
17 nology transfer activities to mitigate the impact of
18 natural disasters.

19 (2) ADVISORY COMMITTEE ON EARTHQUAKE
20 HAZARDS REDUCTION.—The Advisory Committee on
21 Earthquake Hazards Reduction shall be composed of
22 at least 11 members, none of whom may be employ-
23 ees of the Federal Government, including represent-
24 atives of research and academic institutions, indus-
25 try standards development organizations, State and

1 local government, and business communities who are
2 qualified to provide advice on earthquake hazards re-
3 duction and represent all related scientific, architec-
4 tural, and engineering disciplines. The recommenda-
5 tions of the Advisory Committee shall be considered
6 by Federal agencies in implementing the National
7 Earthquake Hazards Reduction Program.

8 (3) ADVISORY COMMITTEE ON WINDSTORM IM-
9 PACT REDUCTION.—The Advisory Committee on
10 Windstorm Impact Reduction shall be composed of
11 at least 7 members, none of whom may be employees
12 of the Federal Government, including representa-
13 tives of research and academic institutions, industry
14 standards development organizations, State and
15 local government, and business communities who are
16 qualified to provide advice on windstorm impact re-
17 duction and represent all related scientific, architec-
18 tural, and engineering disciplines. The recommenda-
19 tions of the Advisory Committee shall be considered
20 by Federal agencies in implementing the National
21 Windstorm Impact Reduction Program.

22 (4) ASSESSMENTS.—The Advisory Committee
23 on Earthquake Hazards Reduction and the Advisory
24 Committee on Windstorm Impact Reduction shall
25 offer assessments on—

1 (A) trends and developments in the nat-
2 ural, social, and engineering sciences and prac-
3 tices of earthquake hazards or windstorm im-
4 pact mitigation;

5 (B) the priorities of the Programs' Stra-
6 tegic Plans;

7 (C) the coordination of the Programs; and

8 (D) and any revisions to the Programs
9 which may be necessary.

10 (5) REPORTS.—At least every two years, the
11 Advisory Committees shall report to the Director of
12 the National Institute of Standards and Technology
13 on the assessments carried out under paragraph (4)
14 and their recommendations for ways to improve the
15 Programs. In developing recommendations for the
16 National Earthquake Hazards Reduction Program,
17 the Advisory Committee on Earthquake Hazards Re-
18 duction shall consider the recommendations of the
19 United States Geological Survey Scientific Earth-
20 quake Studies Advisory Committee.

21 (c) COORDINATION OF FEDERAL DISASTER RE-
22 SEARCH, DEVELOPMENT, AND TECHNOLOGY TRANS-
23 FER.—Not later than 2 years after the date of enactment
24 of this Act, the Subcommittee on Disaster Reduction of
25 the Committee on Environment and Natural Resources of

1 the National Science and Technology Council shall submit
 2 a report to the Congress identifying—

3 (1) current Federal research, development, and
 4 technology transfer activities that address hazard
 5 mitigation for natural disasters, including earth-
 6 quakes, hurricanes, tornados, wildfires, floods, and
 7 the current budgets for these activities;

8 (2) areas of research that are common to two
 9 or more of the hazards identified in paragraph (1);
 10 and

11 (3) opportunities to create synergies between
 12 the research activities for the hazards identified in
 13 paragraph (1).

14 **TITLE IV—NATIONAL CON-**
 15 **STRUCTION SAFETY TEAM**
 16 **ACT AMENDMENTS**

17 **SEC. 401. NATIONAL CONSTRUCTION SAFETY TEAM ACT**
 18 **AMENDMENTS.**

19 The National Construction Safety Team Act (15
 20 U.S.C. 7301 et seq.) is amended—

21 (1) in section 2(a)—

22 (A) by striking “a building or buildings”
 23 and inserting “a building, buildings, or infra-
 24 structure”; and

1 (B) by striking “To the maximum extant
2 practicable, the Director shall establish and de-
3 ploy a Team within 48 hours after such an
4 event.” and inserting “The Director shall make
5 a decision whether to deploy a Team within 72
6 hours after such an event.”;

7 (2) in section 2(b)(1), by striking “buildings”
8 and inserting “buildings or infrastructure”;

9 (3) in section 2(b)(2)(A), by striking “building”
10 and inserting “building or infrastructure”;

11 (4) in section 2(b)(2)(D), by striking “build-
12 ings” and inserting “buildings or infrastructure”;

13 (5) in section 2(c)(1), by striking “the United
14 States Fire Administration and”;

15 (6) in section 2(c)(1)(G), by striking “building”
16 and inserting “building or infrastructure”;

17 (7) in section 2(c)(1)(J)—

18 (A) by striking “building” and inserting
19 “building or infrastructure”; and

20 (B) by inserting “and the National Wind-
21 storm Impact Reduction Act of 2004” after
22 “Act of 1977”;

23 (8) in section 4(a), by striking “investigating a
24 building” and inserting “investigating building and
25 infrastructure”;

1 (9) in section 4(a)(1)—

2 (A) by striking “a building” and inserting
3 “a building or infrastructure”; and

4 (B) by striking “building” both of the
5 other places it appears and inserting “building
6 or infrastructure”;

7 (10) in section 4(a)(3), by striking “building”
8 both places it appears and inserting “building or in-
9 frastructure”;

10 (11) in section 4(b), by striking “building” both
11 places it appears and inserting “building or infra-
12 structure”;

13 (12) in section 4(c)(1) and (2), by striking
14 “building” both places it appears and inserting
15 “building or infrastructure”;

16 (13) in section 4(d)(3) and (4), by striking
17 “building” both places it appears and inserting
18 “building or infrastructure”;

19 (14) in section 7(a), by striking “on request
20 and at reasonable cost”;

21 (15) in section 7(c), by striking “building” and
22 inserting “building or infrastructure”;

23 (16) in section 8(1) and (4), by striking “build-
24 ing” both places it appears and inserting “building
25 or infrastructure”;

1 (17) in section 9, by striking “the United
2 States Fire Administration and”;

3 (18) in section 9(2)(C), by striking “building”
4 and inserting “building or infrastructure”;

5 (19) in section 10(3), by striking “building”
6 and inserting “building and infrastructure”;

7 (20) in section 11(a), by striking “the United
8 States Fire Administration and”; and

9 (21) by striking section 12.

10 **TITLE V—FIRE RESEARCH** 11 **PROGRAM**

12 **SEC. 501. FIRE RESEARCH PROGRAM.**

13 Section 16(a)(1) of the National Institute of Stand-
14 ards and Technology Act (15 U.S.C. 278f(a)(1)) is
15 amended—

16 (1) in subparagraph (D), by inserting “fires at
17 the wildland-urban interface,” after “but not limited
18 to,”; and

19 (2) in subparagraph (E), by inserting “fires at
20 the wildland-urban interface,” after “types of fires,
21 including”.

○